Proposed Modification to the Cruise Ship MOU in Washington State

To: Amy Jankowiak, Department of Ecology (please share with other MOU members)
From: Fred Felleman, NW Consultant, Friends of the Earth 206.595.3825
Date: 15 January 2010

The Friends of the Earth (formerly Bluewater Network) has appreciated the ability to participate in all of the Cruise Ship MOU meetings to date. We have been encouraged by the gradual progress that has been made to elevate the protections afforded Washington's waters overt this time. However, we have been unaware of how to make formal proposals for changes to the MOU to be discussed at the annual meetings. In addition, we believe that having the results of the previous cruise season available to review prior to the meetings would foster better public awareness and more meaningful contributions.

Despite the lack of guidance and current discharge data we would like to put forward the following proposal for discussion at the meeting on the 20th of this month. We would be happy to provide additional supporting documents as a result of those discussions but hope that the proposal will be fully considered prior to the start of the 2010 season.

Background:
This past December marked the one-year anniversary of the release of the Puget Sound Partnership's Puget Sound Action Agenda - Protecting and Restoring the Puget Sound Ecosystem by 2020. That document was written in response to the Governor's and State Legislature's concern for the deteriorating health of Puget Sound. In the preamble to the Action Agenda the Leadership Council States:

"For the most part, we have not caused the Sound's decline out of malice. The Sound's health has largely been compromised by: how we have covered up the land with houses, buildings and parking lots; how we live and prosper; how we treat our waste; and how we transport ourselves."

The Action Agenda identifies many issues impacting the Sound and many actions to be taken to restore it. We have identified some below that we believe should be of particular concern to the MOU participants.

C.1.2 Implement targeted air emission and source control programs for land-based vehicles, marine vessels, and air transportation.

C.1.2.5 Establish No Discharge Zones for commercial and/or recreational vessels in all or parts of Puget Sound that have nutrient and/or pathogen problems, have high vessel use, and are significant for shellfish production. Establishing No Discharge Zones will require pump-out facilities with maintenance programs prior to implementation of the new rules.

C.3 Prioritize and complete upgrades to wastewater treatment facilities to reduce pollutant loading.

C.3.4 Continue to investigate and invest in technologies that reduce nutrients, pathogens and emerging chemicals.

C.1 Near-term Actions

5. Petition EPA to establish Puget Sound as a No Discharge Zone for commercial and/or recreational vessels to eliminate bacteria, nutrients, and pathogens from being discharged into Puget Sound. Prioritize areas of the Sound that have nutrient and/or pathogen problems, have high vessel use,

7. Implement Shellfish Protection District plans, on-site sewage treatment plans in marine recovery areas, and related projects to restore water quality at tribal, commercial, and recreational shellfish areas that are degraded or threatened.

The Department of Ecology recently completed a review of sediment quality in Elliott Bay entitled, "Focus on Puget Sound's Urban Bays from the Environmental Assessment Program September 2009 Sediment Quality in Elliott Bay, 1998 to 2007 Publication No. 09-03-043, www.ecy.wa.gov/biblio/0903043.html."

Table1 of that study summarizes bay-scale changes from 1998 to 2007 in individual parameters measured in Elliott Bay sediment. Those data revealed improvements in the sediment toxicity of benthic communities including metals such as: Lead, Mercury, Silver, Tin Many LPAHs1 Most HPAHs2 Most PCBs.

There was no change in metals: Arsenic, Cadmium, Chromium, Copper, Nickel and Some LPAHs1 HPAHs2: Chrysene, Perylene.

But there was deterioration in metals: Zinc LPAHs1: Acenaphthylene, Retene Bis(2-ethylhexyl)phthalate.

The Department of Ecology conducted another long term study entitled, "Long-term Monitoring of Puget Sound, Grays Harbor and Willapa Bay: Status and trends in water quality from 2001-2005
http://www.ecy.wa.gov/programs/eap/mar_wat/presentation_maloy_gbps_07.pdf.

In that paper Ecology uses five indicators to calculate an index of water quality concern:

1. Fecal coliform bacteria levels
• High levels indicate the presence of a nearby contaminant source.

2. Concentrations of dissolved inorganic nitrogen (DIN)
• Low levels indicate that phytoplankton growth may be nutrient-limited and, therefore, the water body may be sensitive to the effects of eutrophication.

3. Ammonium (NH4) levels
• High concentrations indicate the presence of a nutrient source.

4. Dissolved Oxygen concentration
• Low DO is often associated with a combination of strong stratification and high productivity driven by high nutrient availability.

5. Persistence of stratification
• Strong and persistent stratification indicates that mixing of surface and bottom waters is reduced both spatially and temporally.

Using these parameters Ecology found that Elliot Bay, Commencement Bay and Bellingham Bay are areas of high water quality concern.

While we acknowledge that the members of the NW Cruise Ship Association have made substantial investments to address their environmental footprint, we believe there is an opportunity to take an additional step to demonstrate their commitment to be part of the Partnership in the protection of Puget Sound. Most studies of cruise ship waste water quality assumes the vessel to be discharging while traveling at a speed of at least 6 knots but vessels can seek permission to discharge continuously in Washington, including while moored at the dock. In reviewing the discharge information from each of the cruise seasons there appears to be a clear trend for fewer and fewer ships to seek authority to discharge in Washington waters. We have learned from the Port of Seattle's June 2009, Cruise Vessel Biomass Management Study, that there is no problem for a cruise ship to hold their treated sewage for at least four days which is more than sufficient to cover their 24 hour stay in Washington.

Given the high levels of ammonia and other nutrients associated with the concentrated discharges cruise ships produce, not to mention the likely presence of pharmaceuticals, viruses and cleaning agents being discharged to surface waters, we hereby request that the MOU be amended to ban all discharges while the vessels are at the dock.

Thank you for your consideration and we look forward to seeing you on the 20th. We would like to conclude with the statement made by the Puget Sound Leadership Council in the conclusion to their preamble to the Puget Sound Action Plan by saying: "It's unthinkable – indeed, unconscionable – that we would not take the necessary steps to make our home prosperous and safe for ourselves and every other living thing whose very existence depends on us.....Now is our chance to make and keep Puget Sound a healthy and prosperous place for all of us."